

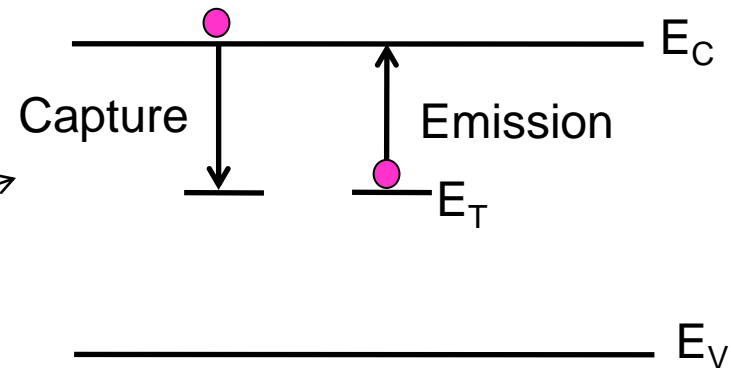
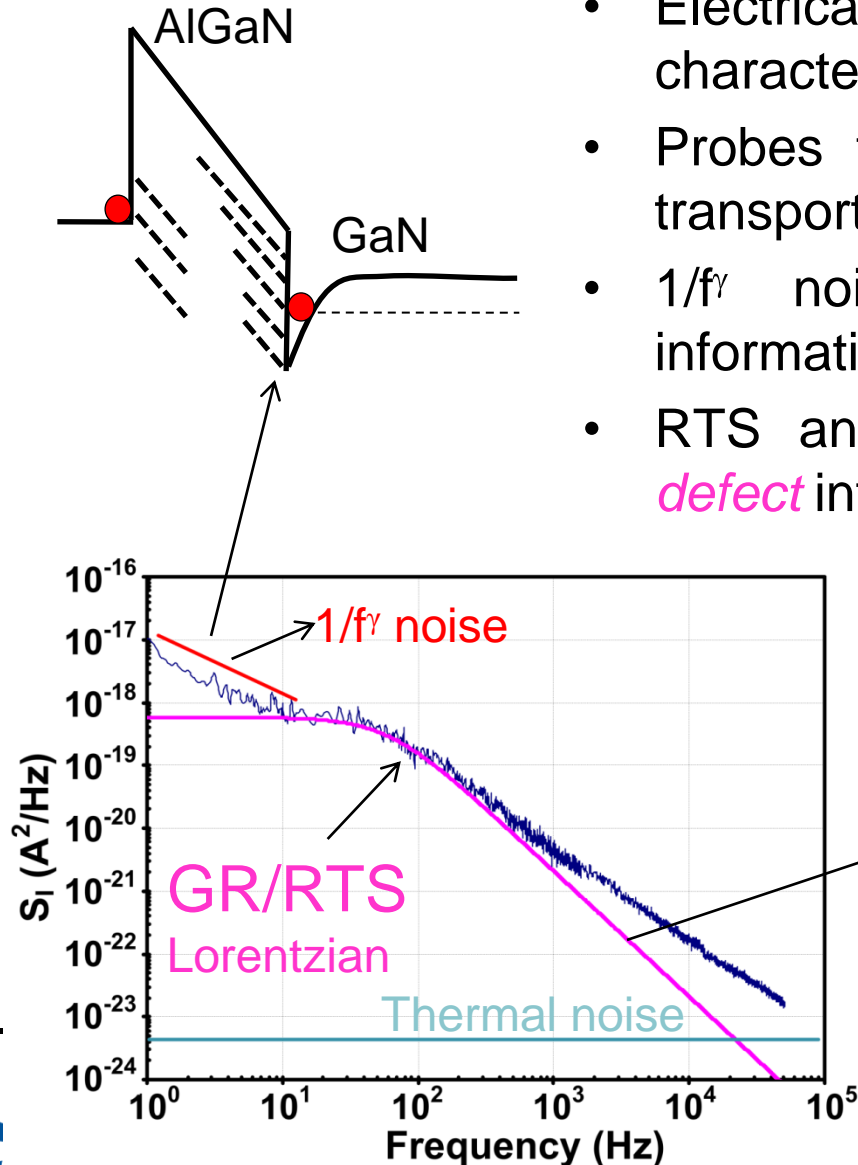
Defect noise characterization of as made and stressed GaN HEMTs

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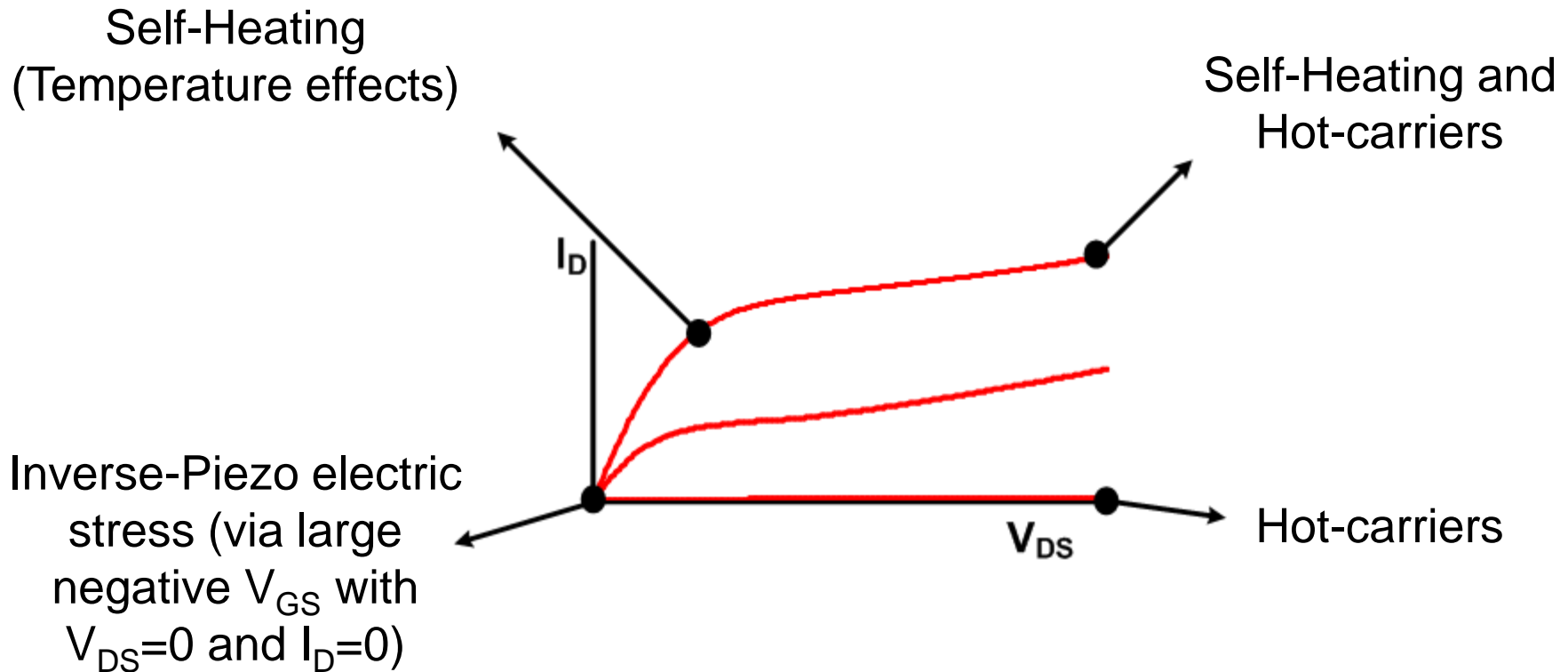


Defect spectroscopy via LFN noise

- Electrically **benign** and **non-destructive** trap characterization technique.
- Probes traps which directly affect the charge transport
- $1/f^\gamma$ noise gives **interface defect** quality information
- RTS and GR related Lorentzians give **point defect** information.



Stress effects in GaN HEMTs



Current emphasis

- Carry out LFN noise studies on many AFRL devices to establish statistically significant base lines and trends.
- Correlate our findings with TEM results and other techniques